



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,122	01/24/2001	Thomas J. Walczak	CS10560	5562

7590

08/12/2005

Motorola, Inc.
Intellectual Property Dept. (RKB)
600 North US Highway 45, AN475
Libertyville, IL 60048

EXAMINER

BHATTACHARYA, SAM

ART UNIT

PAPER NUMBER

2687

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/769,122	Applicant(s) WALCZAK ET AL.	
	Examiner Sam Bhattacharya	Art Unit 2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, 15, 17-19, 21-23, 25-27 and 31 is/are rejected.
- 7) ☒ Claim(s) 7, 14, 16, 20, 24, 28-30, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 9, 12, 13, 15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kingdon (US 6,411,811).

As to claim 1, the Kingdon reference discloses a method for validating a non-network based location fix of a mobile station in a communications network, comprising: generating a non-network based location (GPS) fix of the mobile station;; evaluating the validity of the non-network based location fix of the mobile station by comparing the non-network based location fix with a prior network based location fix. See col. 3, lines 2-19.

As to claim 2, the Kingdon reference discloses the method of Claim 1, generating the non-network based location fix includes receiving global positioning system signals at the mobile station. See col. 3, line 1.

As to claims 3 and 13, the Kingdon reference discloses the communications network having a plurality of base stations 24, generating the network based location fix by measuring a time related parameter of signals received at the mobile station from several base stations neighboring the mobile station. See FIG. 1.

As to claim 12, as cited in claim 1, the Kingdon reference discloses a method for validating a satellite positioning system based location fix of a satellite positioning system

Art Unit: 2687

enabled cellular mobile station in a cellular communications network, comprising: generating a satellite positioning system based location fix of the mobile station;; evaluating the validity of the satellite positioning system based location fix by comparing the satellite positioning system based location fix to a prior network based location fix.

As to claims 9, 15, and 19, the Kingdon reference discloses the method of Claims 1 and 12, evaluating the validity of the non-networked (or satellite positioning system) based location fix by comparing it to one network based location fix, generating a plurality of network based location fixes of the mobile station and evaluating the validity of the non-networked (or satellite positioning system) based location fix by comparing it to at least one of the plurality of network based location fixes. See col. 4, lines 44-54.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 4-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon in view of Hill et al. (U.S. Patent 5,857,155).

As to claim 4, the Kingdon reference discloses the method of Claim 1. However, it does not disclose translating the network based location fix and the non-network based location fix into a common format prior to comparing the network and non-network based location fixes. The

Art Unit: 2687

Hill reference teaches “a method of controlling the operation of a subscriber device having a GPS receiver within a messaging system having a plurality of transmitters having known coordinates comprises the steps of acquiring GPS information from the GPS receiver and accessing a memory location having known transmitter coordinates and comparing the known transmitter coordinates with the GPS information” (Col. 1, lines 58-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to translate the network based location fix and the non-network based location fix into a common format prior to comparing the network and non-network based location fixes, as taught by Hill, in order to control the operation of a subscriber device with adjustment to the power from the transmitter module.

As to claim 5, the Kingdon reference discloses the method of Claim 1. However, it does not disclose generating the non-network based location fix of the mobile station in longitude and latitude coordinates, converting the network based location fix to longitude and latitude coordinates before comparing the network based location fix with the non-network based location fix. The Hill reference teaches “Figure 5, the method 200 comprises at step 202 of acquiring GPS information at a selective call receiver from the GPS receiver comprising information selected from the group of latitude, longitude, and velocity” (Col. 5, lines 41-45). “At step 200 a look-up table of the known transmitter coordinates is accessed and compared with the known transmitter coordinates with the GPS information” (Col. 5, lines 49-52).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to generate the non-network based location fix of the mobile station in longitude and latitude coordinates, converting the network

Art Unit: 2687

based location fix to longitude and latitude coordinates before comparing the network based location fix with the non-network based location fix, as taught by Hill, in order to control the operation of a two-way selective call subscriber device.

As to claim 6, the Kingdon reference discloses the method of Claim 1. However, it does not disclose evaluating the validity of the non-network based location fix by determining whether the non-network based location fix is within a specified range of the network based location fix. The Hill reference teaches "the known GPS position of the subscriber could be used to determine the range to the nearest local base receiver. The location of the nearest base receivers would be stored in a code plug table preferably in the form of a base receiver location map 54. The minimum distance to a receiving base station would easily be calculated from the GPS information" (Col. 3, lines 46-52).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to evaluate the validity of the non-network based location fix by determining whether the non-network based location fix is within a specified range of the network based location fix, as taught by Hill, in order to adjust the transmit output level in a subscriber device.

As to claim 8, as cited in claim 1, the Kingdon reference discloses the method of Claim 1, the communications network having a plurality of base stations, generating the network based location fix by measuring at the mobile station several base station signals neighboring the mobile station. However, it does not disclose evaluating the validity of the non-network based location fix by determining whether the non-network based location fix is within a specified range of the network based mobile station location fix. As cited in claim 6, the Hill reference

Art Unit: 2687

teaches evaluating the validity of the non-network based location fix by determining whether the non-network based location fix is within a specified range of the network based mobile station location fix.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to evaluate the validity of the non-network based location fix by determining whether the non-network based location fix is within a specified range of the network based location fix, as taught by Hill, in order to adjust the transmit output level in a subscriber device.

4. Claims 10 and 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon in view of Bala et al. (U.S. 6,539,230).

As to claims 10 and 17, Kingdon discloses the method of Claims 9 and 12. However, it does not disclose evaluating the validity of the non-network (or satellite positioning system) based location fix by determining whether the non-network (or satellite positioning system) based location fix is closer to a less recently generated network based location fix than it is to a more recently generated network based location fix. The Yen reference teaches evaluating the validity of the non-network (or satellite positioning system) based location fix by determining whether the non-network (or satellite positioning system) based location fix is closer to a less recently generated network based location fix than it is to a more recently generated network based location fix ("the location information may be supplied, for example, by a global positioning satellite (GPS) receiver in the wireless terminal, or by other location measurement techniques (e.g., triangulation based on signal strengths, dead reckoning)" (Col. 2, lines 39-43).

Art Unit: 2687

“In step 208, the wireless terminal will determine that the second entry of the location/parameter table, having location (x_1, y_1) , is the closest to the current location of (x_4, y_4) . Assuming that the test in step 210 indicates that the distance between (x_1, y_1) and (x_4, y_4) is less than L , control will pass to step 216, at which point the entry containing (x_1, y_1) and DCCH1 is placed in the first location of the location/parameter table and the other entries are shifted down” (Col. 7, lines 39-46). See Col. 6, line 48 to Col. 7, line 55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to evaluate the validity of the non-network based location fix by determining whether the non-network based location fix is closer to a less recently generated network based location fix than it is to a more recently generated network based location fix, as taught by Yen, in order to update and store current location and location-dependent operating parameter for a mobile station.

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon in view of Bala et al. (U.S. Patent Application Publication 2002/0068580 A1).

As to claim 11, the Kingdon reference discloses the method of Claim 1. However, it does not disclose generating a plurality of network based location fixes of the mobile station, estimating a future location fix of the mobile station based on the plurality of the network based location fixes, evaluating the validity of the non-networked based location fix by determining whether the non-network based location fix is within a specified range of the estimated location fix. As cited in claim 9, The Bala reference teaches generating a plurality of network based location fixes of the mobile station (“movement information for a subscriber can include past

locations for a subscriber, e.g., the identity of and number of times transmitters have successfully polled the subscriber, or future expected movement activity” (page 1, col. 1, paragraph [0006], lines 8-12)) and estimating a future location of the mobile station based on the plurality of the network based location fixes (“the movement information for the subscriber is analyzed to determine the likely current location of the subscriber” (page 2, col. 1, paragraph [0019], lines 2-4)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to generate a plurality of network based location fixes of the mobile station and estimate a future location fix of the mobile station based on the plurality of the network based location fixes, as taught by Bala, in order to determine the probable current location of the mobile station.

3. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Kingdon in view of Hill et al. (U.S. Patent 5,857,155).

As to claim 18, Kingdon discloses the method of Claim 17, estimating a future location of the mobile station by extrapolating along an estimated path of the mobile station. However, Kingdon does not disclose evaluating the validity of the satellite positioning system based location fix by determining whether the satellite positioning system based location fix is within a specified range of the estimated location fix.

The Hill reference teaches evaluating the validity of the satellite positioning system based location fix by determining whether the satellite positioning system based location fix is within a specified range of the estimated location fix (“the known GPS position of the subscriber could be

Art Unit: 2687

used to determine the range to the nearest local base receiver. The location of the nearest base receivers would be stored in a code plug table preferably in the form of a base receiver location map 54. The minimum distance to a receiving base station would easily be calculated from the GPS information" (Col. 3, lines 46-52)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the method of Kingdon to evaluate the validity of the satellite positioning system based location fix by determining whether the satellite positioning system based location fix is within a specified range of the estimated location fix, as taught by Hill, in order to determine an expected area within which a mobile station is located.

5. Claims 21-23, 25-27 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Fan (US 5,906,655).

As to claims 21 and 25, Fan discloses a method for validating a location fix of a mobile station ("mobile machine"), including generating a plurality of location fixes of the mobile station, and evaluating the validity of a recently generated location fix of the mobile station by comparing the location fix for which the validity determination is required to a previously generated mobile station location fix. See col. 1, lines 49-60. A GPS system is valid if a GPS estimate and an inertial navigation unit estimate are the same.

As to claim 22, the Fan reference discloses evaluating the validity of the location fix based on a specified range of a previously generated location fix. See col. 1, line 67 – col. 2, line 3.

Art Unit: 2687

As to claims 23 and 26, the Fan reference discloses defining the specified range based on estimated velocity of the mobile station and a time variable. See col. 1, lines 65-67.

As to claim 27, Fan shows a cellular mobile station, comprising:

a satellite positioning system (GPS) signal reception interface 216 in the mobile station (“mobile machine”) for receiving satellite positioning system signals;

a cellular communications network interface in the mobile station for communicating with a cellular communications network;

an information processor 208 coupled to the satellite positioning system signal reception interface and the cellular communications network interface,

the information processor for evaluating the validity of a satellite positioning system based location fix by comparing it to one mobile station location fix and by comparing it to at least one prior mobile station location fix. See col. 1, lines 49-60 and col. 3, lines 55-65.

As to claim 31, the Fan reference discloses evaluating the validity of the location fix based on a specified range of a previously generated location fix. See col. 1, line 67 – col. 2, line 3.

Allowable Subject Matter

Art Unit: 2687

6. Claims 7, 14, 16, 20, 24, 28-30, 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the claims are objected to for the reasons state in the previous Office action.

Response to Arguments

8. Applicant's arguments filed on 5/12/05 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with Applicant's arguments. Applicant states that various limitations in the rejected claims are not taught in the applied references. However, it does not appear that Applicant has attempted to explain why these limitations are distinguished from the teachings in the references. Therefore, the Examiner relies mainly on the rejections of the claims as set forth above in responding to Applicant's arguments. The following are the Examiner's responses to Applicant's arguments on the respective claims:

Regarding claims 1, 2 and 9, Kingdon discusses evaluating the validity of the non-network based location fix by comparing the non-network based location fix with a prior network based location fix of the mobile terminal. See Kingdon, col. 3, lines 1-19.

Regarding claims 3 and 13, Kingdon measures timing parameters of the reference GPS stations to compute position or determine a location fix. See Kingdon, FIG. 1.

Regarding claims 12 and 19, Kingdon discloses evaluating the validity of the satellite positioning system base location fix by comparing it to a prior network based location fix. See Kingdon, col. 4, lines 44-54.

Regarding claim 15, Kingdon compares a satellite positioning system based location fix to a plurality of network based location fixes. See Kingdon, col. 4, lines 44-54.

Regarding claims 4 and 5, Hill discloses comparing a network based coordinate of the mobile terminal with a non-network based coordinate of the terminal. See Kingdon, col. 1, lines 58-65 and col. 5, lines 41-52.

Regarding claim 6, Hill discloses evaluating the validity of a non-network based location fix by determining whether it is within a specified range of the prior network based location fix. See Kingdon, col. 3, lines 46-52.

Regarding claim 8, the ground for rejection is similar to that of claim 6 because the limitations in claim 8 are similar to the limitations in claim 6.

Regarding claim 18, Hill estimates a future location of the mobile station by extrapolating along an estimated path of the mobile station. See Hill, col. 3, lines 46-52.

Regarding claims 10 and 17, Yen teaches evaluating the validity of a non-network or satellite based location fix by determining whether it is closer to a less recently generated network based location fix than it is to a more recently generated network based location fix. See Yen, col. 2, lines 39-43.

Regarding claim 11, Bala teaches estimating a future location fix of the mobile station based on a plurality of prior network based location fixes. See Bala, page 1, col. 1, paragraph [0006], lines 8-12, and page 2, col. 1, paragraph [0019], lines 2-4.

Art Unit: 2687

Regarding claim 21, Fan teaches evaluating the validity of a recently generated location fix by comparing the location fix for which the validity determination is required to a previously generated mobile station location fix. See Fan, col. 1, lines 49-60.

Regarding claim 22, Fan teaches determining whether a location fix is within a specified range of a previously generated fix. See col. 1, line 67 – col. 2, line 3.

Regarding claim 23, Fan teaches determining whether a location fix is within a specified range of a previously generated fix and specifies the range based on an estimated velocity of the mobile station and a time variable. See Fan, col. 1, lines 65-67.

Claim 24 has been objected to for reciting allowable subject matter.

Regarding claim 25, Fan teaches evaluating the validity of a location fix by determining whether it is within a specified range of the estimated future position fix of the mobile station. See Fan, col. 1, lines 49-60.

Regarding claim 26, Fan teaches estimating a velocity of the mobile station, defining the specified range based on the estimated velocity and time interval. See Fan, col. 1, lines 65-67.

Regarding claim 27, Fan teaches an information processor for evaluating the validity of a satellite positioning system based location fix by comparing it to at least one prior mobile station location fix. See Fan, col. 1, lines 49-60 and col. 3, lines 55-65.

Regarding claim 31, Fan teaches an information processor for estimating a future position fix of the mobile station and evaluating the validity of the satellite positioning system based location fix by determining whether it is within a specified range of the estimated future position fix. See Fan, col. 1, line 67 – col. 2, line 3.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Bhattacharya whose telephone number is (571) 272-7917. The examiner can normally be reached on Weekdays, 9-6, with first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2687

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sb


SONNY TRINH
PRIMARY EXAMINER